

REMARKS/ARGUMENTS

Claim Rejections – 35 USC §102

Claims 1-2, 5-19, 21-24, 29-30, and 33 are rejected under 35 U.S.C. §102(e) as being anticipated by Okazaki et al. (US 6,825,502 B2).

Okazaki et al. (col. 8, lines 45-49) states, "To improve adhesion between a plurality of layers forming electrodes 25 and 26, flash annealing is performed at a temperature of about 200°C or more (favorably about 250°C or more (favorably about 250°C) for 20 sec." Because "flash annealing" is used to improve the adhesion between a plurality of electrode layers, rather than to form the Ohmic contact between electrodes 25, 26 and semiconductor layers, n-GaN 21 and p-GaN 24. However, Okazaki et al. from col. 8, lines 22-28 states, "A Ti layer 28, and an Al layer 29 are formed by vacuum evaporation and lift-off. Also, the structure is annealed in a nitrogen atmosphere at about 600°C to form a Ohmic contact between the n-GaN layer 21 and Ti layer 28."Therefore, the real temperature in Okazaki et al. to form Ohmic contact between metal layers and semiconductor layers is 600°C rather than 250°C. Okazaki et al. fail to teach the feature of the present invention, "forming an Ohmic contact between said electric conductive element and said opto-electronic layer at a temperature lower than 250 degrees centigrade", as recited in independent claim 1 and claim 29. Therefore, Okazaki et al. fail to teach every element of the present invention.

Accordingly, reconsideration and withdrawal of the rejection under 35 USC 102 is respectfully requested.

Claim Rejections – 35 USC §103

Claims 3, 20, 25-28, and 31 are rejected under 35 U.S.C. §103(a) as being unpatentable over Okazaki et al. (US 6,825,502 B2) in view of Nakagawa et al. (US 6756289 B1).

Examiner is of the opinion that Nakagawa et al. from col. 2, lines 20-27 discloses a polymeric substrate such as polyimide. However, Nakagawa et al. from col. 2, lines 20-27 states, "Also, as in the amorphous silicon solar battery, if a thin semiconductor layer is formed on a flexible substrate, for example, a film of polymer such as polyimide, it can be located on a substrate having a curved surface, thus expecting the enlargement of an applied field. However, above-mentioned single-crystal or polycrystal silicon solar cell, **it is difficult to use a substrate having poor heat resistance at a high temperature.**" Also, one of ordinary skill in the art knows that polyimide has poor heat resistance, and therefore it cannot be used as a transparent substrate if the annealing process temperature is about 600°C.

Applicant respectfully submits that the present invention should be treated as a whole. Because the present invention discloses "forming an Ohmic contact between said electric conductive element and said opto-electronic layer at a temperature lower than 250 degrees centigrade", the transparent substrate can be selected from a plurality of materials, which cannot endure high temperature processes during annealing, such as those materials recited in claim 20, 25-28. Because the annealing temperature in Okazaki et al. is about 600°C, it is respectfully submitted that the polyimide in Nakagawa et al. cannot be combined with Okazaki et al. to be used as a transparent substrate.

Accordingly, it is respectfully submitted that the independent claims 1, and 29 as well as its dependent claims is neither taught or suggested by the prior art utilized by the Examiner. Accordingly, reconsideration and withdrawal of the 35

USC 103 rejection are respectfully requested.

Conclusion

In light of the above remarks to the claims, Applicant contends that Claims 1-33 are patentable the cited art and the claims are believed to be in condition for favorable consideration and Applicant respectfully requests that a timely Notice of Allowance be issued in this case. If the Examiner believes that an in-person or telephonic conference would expedite prosecution of this application, they are invited to contact the Applicant's counsel at the number listed below.

Respectfully submitted,
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